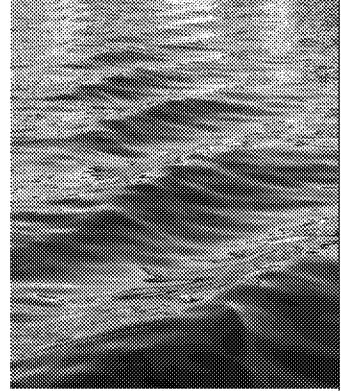
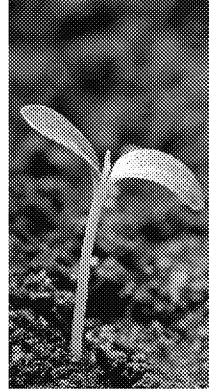


## Summary of Anaconda Smelter Conceptual Settlement Framework

December 2018



# Presentation Outline

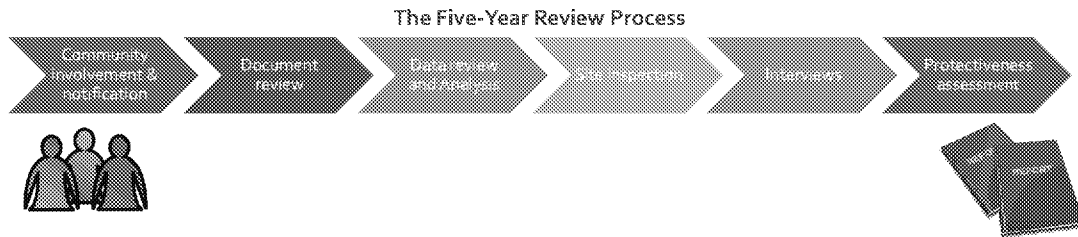
- Introductions
- Status and next steps
- Conceptual settlement overview
- Work completed to date
- Work to be done
- Process moving forward

## Site Delisting

- **Initiated delisting** of Mill Creek and Flue Dust operable units in **2018**.
  - **OU 15** – Mill Creek. Cleanup is complete. Anaconda-Deer Lodge County is working with developers to reuse the site.
  - **OU 11** – Flue Dust. Cleanup is complete. Atlantic Richfield is developing a plan to minimize and manage leachate generated from the repository.
- **Complete delisting** of Mill Creek and Flue Dust operable units in **2019**.
- **Initiate delisting of entire site** by **2025**.

## EPA Five-Year Reviews

- Initiate the **sixth** Five-Year Review for Anaconda in 2019
- Solicit public input on effective risk communication and public outreach.
- Studies and investigations include:
  - Health studies
  - Contamination in schools
  - Slag risk
  - Wildlife and livestock risk



## School Sampling Status

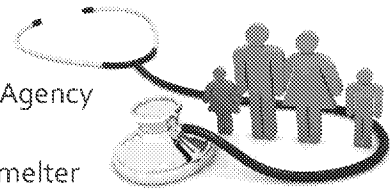
- Tested for **lead and arsenic** in schools.
- EPA sampled the **interiors** of Anaconda schools and Head Start spring 2018.
- Atlantic Richfield tested **soils** at the same locations.
- Classrooms, hallways, entrances, lunchrooms, gymnasiums and other spaces used by students and workers were **all below residential action levels**.
- **One soil area** required cleaned up.
- **Attic dust** cleanup was required at two locations.
- **Cleanup completed in 2018.**



Interior dust sampling

## Human Health Study Status

- EPA is **funding a health study** being conducted by the Agency for Toxic Substances Disease Registry (ATSDR).
- The study is designed to evaluate **public exposure** to smelter contaminants.
- ATSDR sampled over 300 residents for blood-lead and urine-arsenic in 2018.
- ATSDR will complete an **exposure investigation** in 2019.
- The county and state will conduct a **community health assessment** evaluating mental health, addiction and aging concerns brought up by the community.
- EPA is currently conducting a **vegetable study** to evaluate fruits and vegetables being grown in Anaconda and the surrounding area.
- **Results** of the studies are expected in 2019.



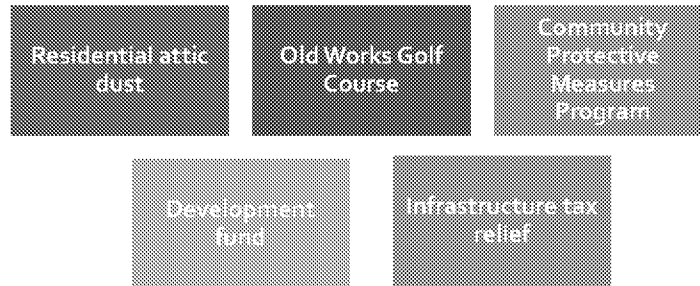
## Conceptual Agreement Overview

- **December 4, 2018, confidentiality order modified** to publicly disclose certain assessments and other information about the proposed remedial action.
- Based on community input and collaboration between agencies and stakeholders, a **modified remedy proposal** has been developed.
- Under the proposed remedy:

Residential Yards	Attics	Commercial Properties	Slag Piles	Additional Uplands
<ul style="list-style-type: none"><li>• Sample all</li><li>• Cleanup where needed</li></ul>	<ul style="list-style-type: none"><li>• All addressed under new cleanup program</li></ul>	<ul style="list-style-type: none"><li>• Sample all</li><li>• Cleanup where needed</li></ul>	<ul style="list-style-type: none"><li>• Cover while allowing reuse</li></ul>	<ul style="list-style-type: none"><li>• Reduce contaminant loading to streams</li></ul>

## Conceptual Agreement Overview (continued)

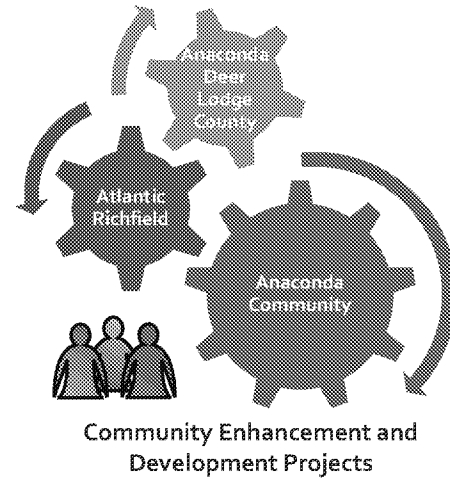
- **Atlantic Richfield would provide funding** to Anaconda-Deer Lodge County to support the remedy, implement institutional controls, and provide for community enhancement and development.
- Proposed funding would include:



- **Implementation of these remedy and development projects will support future delisting** of the Anaconda Smelter Superfund site.

## Conceptual Agreement Overview (continued)

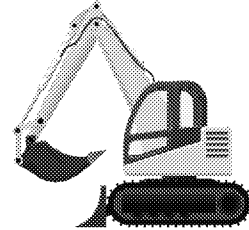
- Anaconda-Deer Lodge County and Atlantic Richfield will negotiate an allocation and settlement agreement to provide funding for **community enhancement and development projects**.
- Community enhancement and development projects would be developed through **community participation and visioning**.



## Work Completed to Date

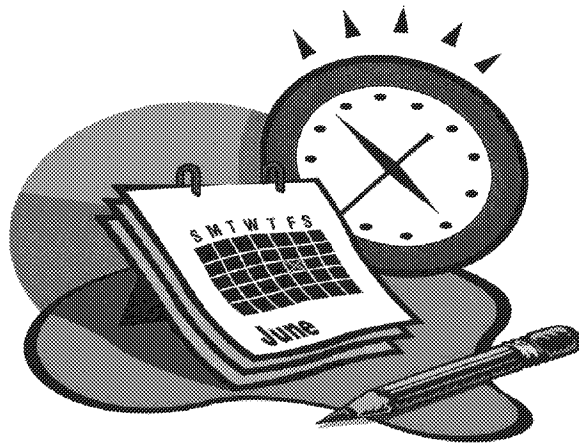
### Remedial actions completed on over 80% of the site:

- Treated and disposed **1 million+** cubic yards of hazardous waste (flue dust, Arbiter waste and beryllium).
- Consolidated **several million cubic yards** of smelter waste into disposal areas.
- **Capped Old Works smelter.**
- **Constructed** Jack Nicklaus designed **golf course.**
- Capped **5,000+ acres** (Smelter Hill and the Anaconda and Opportunity tailings impoundments).
- Created **700+ acres** of new or restored wetland areas.
- Treated and revegetated **12,000+ acres** of valley soils.
- Installed **miles of stormwater controls.**
- Restored/stabilized **miles of stream banks** on Warm Springs and Willow Creeks.
- Sampled and cleaned up **1,000+ residential properties.**



## Work to be Done

- Community soils
- Upland soils and surface water
- Slag
- Institutional controls



## Community Soils – Major Elements

- **Residential Soils**

- Sample all residential properties within the Site.
- Cleanup all individual yard components that exceed **250 ppm arsenic** and/or **400 ppm lead** (no averaging)

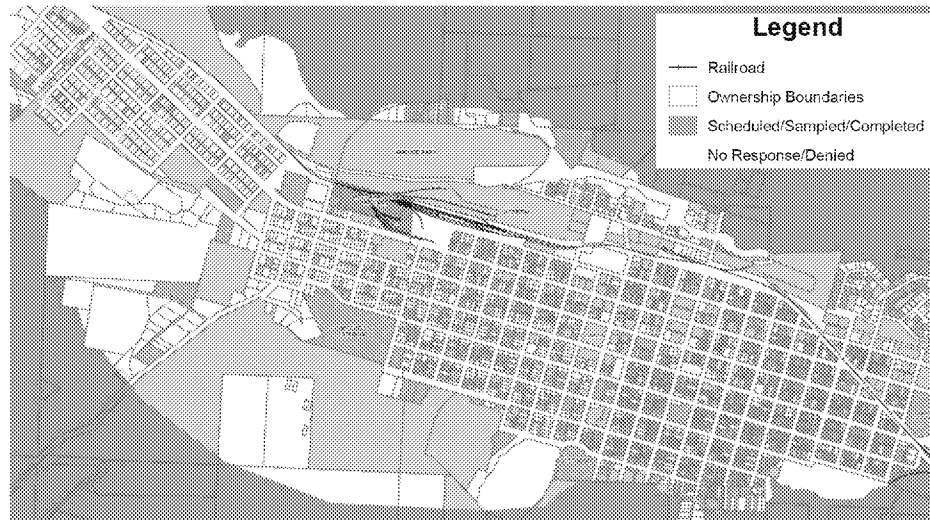
- **Residential Attics**

- Long-term program to **sample and cleanup, where needed, all residential attics** on site.

- **Commercial and Recreational Properties**

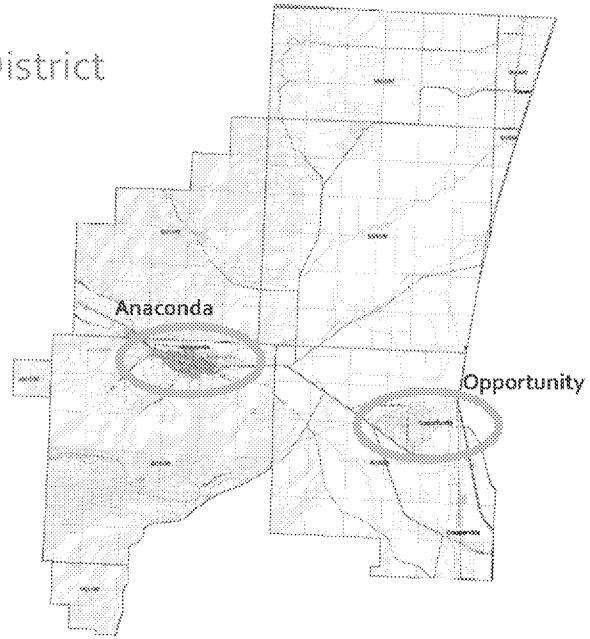
- Sample and cleanup, where needed, **all commercial and recreational properties** on site.

## Community Soils – 2018 Status



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# Superfund Overlay District



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## Upland Soils and Surface Water – Major Elements

- **Steep Slope Reclamation**
  - Use innovative techniques to establish vegetation on steep slopes.
  - Construct stormwater BMPs to reduce erosion on slopes.
- **Engineered Stormwater Controls**
  - Construct sediment basins to reduce sediment loading to streams.
- **Replace Railroad Bridges on Mill and Willow Creeks**
  - Remove waste materials associated with current bridge embankments.
- **Surface Water Management Plan**
  - Monitor in-stream for metals during wet weather and normal flow conditions.
  - Replace State standards with protective Federal replacement standards for certain contaminants of concern, if needed.

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## Upland Soils and Surface Water – Major Elements

### Work on Slopes

Remedy	Quantity	Units
Aerial Seed	509	AC
Aerial Fertilizer	509	AC
Aerial Weed Spraying	113	AC
On-Slope Wattles	27,250	LF
Planting Trees & Shrubs	13	AC
Check Dams	16	EA

### BMPs

Remedy	Quantity	Units
Stone Check Dams	491	EA
Log Check Dams	1199	EA
Geo-Bag Check Dams	862	EA
Rock Grade Control	16	EA
Riprap Outlet Protection	5	EA

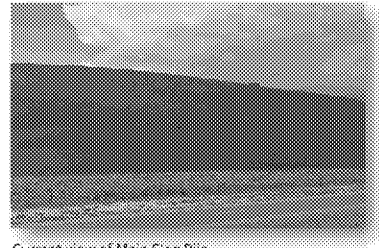
# Upland Areas for Supplemental Surface Water Work



- STREAM/DRAINAGE LINE
- REDESIGNED CHANNELS (RMP)
- PROPOSED LOG CHECK DAMS
- PROPOSED SOFT FILLED CHECK DAMS
- PROPOSED STONE CHECK DAMS
- WATERWAYS (R)
- REDESIGNED INTERCEPTION TRENCH
- REDESIGNED RELEASE AREAS
- EXISTING DESIGNED USE AREAS INDICATED FOR DESIGN
- PROPOSED TREATMENT AREAS (MV)
- WATERWAYS (R)
- EXISTING EXISTING AREAS
- PROPOSED DETENTION PONDS
- PROPOSED DETENTION PONDS

## Slag Management – Major Elements

- **Regrade and cover** north and west faces of Main Slag Pile.
- **Initiate closure** of Arbiter slag pile.
- Continue to **allow reuse** of slag.
  - Require best management practices to protect workers and prevent releases to the environment.
  - Market use of west stack slag.
  - Develop metrics for final closure of slag piles.



Current view of Main Slag Pile



View of how a covered slag pile would look

## Institutional Controls – Major Elements

- **Development Permit System**

- Soils handling protocols
- Domestic well testing



- **Community Protective Measures Program**

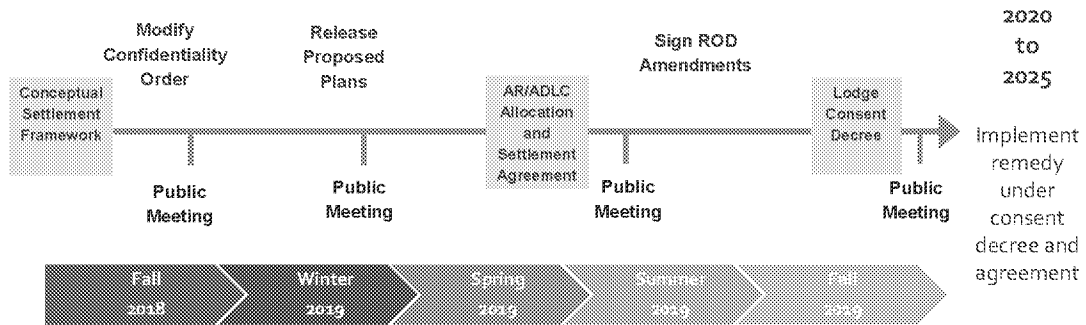
Blood lead  
monitoring

Soil swap  
program

Interior dust  
program

Community  
outreach &  
education

## Process Moving Forward



AR=Atlantic Richfield  
ADLC=Anaconda-Deer Lodge County

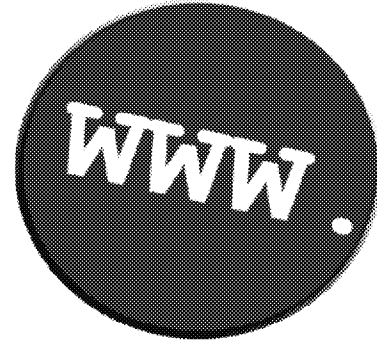
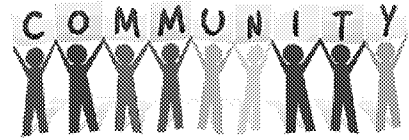
## Where We Are

Timeframe	Decision or Action
October 11, 2018	Complete Conceptual Settlement Framework
December 4, 2018	Modify confidentiality order. To be followed by public meeting.
<u>Next Steps</u>	
Spring 2019	Release proposed plans. Hold public meeting.
August 2019	AR and ADLC to complete allocation and settlement agreement. Hold public meeting.
Fall 2019	Complete decision documents.
December 2019	Lodge consent decree. Hold public meeting
2020-2025	Remedy implementation under CD and agreement

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## Community Engagement and Collaboration

- How can stakeholders and the community participate?
  - Technical Assistance Group
  - Superfund Task Force
  - Site work groups (public health study)
  - Participate/review and comment on decision documents
  - Contact Chris Wardell, [wardell.chris@epa.gov](mailto:wardell.chris@epa.gov), Community Involvement Coordinator
  - Contact Charlie Coleman, [coleman.charles@epa.gov](mailto:coleman.charles@epa.gov), Remedial Project Manager
- Website information
  - <https://epa.gov/superfund/anaconda-co-smelter>



# Questions

